

WHAT IS CLAIMED IS:

1. A water-soluble or water-dispersible polyurethane comprising the reaction product of
  - 5 A) at least one polyether polyol a1) having a average functionality of  $\geq 3$  and at least one urethane group-containing polyether polyol a2) having an average functionality of  $\geq 4$ ,
  - B) at least one monoalcohol with 6 to 22 carbon atoms,
  - C) at least one (cyclo)aliphatic and/or aromatic diisocyanate
  - 10 D) optionally at least one monoisocyanate with 4 to 18 carbon atoms, and
  - E) optionally at least one polyisocyanate having an average functionality of  $> 2$ ,wherein the starting NCO/OH equivalent ratio is between 0.5:1 to 1.2:1.
- 15 2. The polyurethane of claim 1 wherein polyether polyol a1) has an average functionality of 3 to 4.
3. The polyurethane of claim 1 wherein polyether polyol a1) has an average functionality of 4 to 6.
4. The polyurethane of claim 1 wherein monoalcohol B) has 6  
20 to 18 carbon atoms.
5. The polyurethane of claim 1 wherein diisocyanate C) is a (cyclo)aliphatic diisocyanate.
6. The polyurethane of claim 1 wherein monoisocyanate D) has 8 to 18 carbon atoms.
- 25 7. The polyurethane of claim 1 obtained in a one-stage or multi-stage reaction.
8. The polyurethane of claim 1 wherein urethane group-containing polyether polyol a2) is produced by partial reaction of polyether polyol a1) with a diisocyanate.

9. The polyurethane of claim 8 wherein urethane group-containing polyether polyol a2) is produced by partial reaction of polyether polyol a1) with a polyisocyanate having an average functionality of  $\geq 2$ .

5 10. A process for the production of the water-soluble or water-dispersible polyurethane of claim 1, comprising reacting

- A) a mixture of at least one polyether polyol a1) having an average functionality of  $\geq 3$  and at least 1 urethane group-containing polyether polyol a2) having an average functionality of  $\geq 4$ ,
  - B) at least one monoalcohol with 6 to 22 carbon atoms,
  - 10 C) at least one (cyclo)aliphatic and/or aromatic diisocyanate,
  - D) optionally at least one monoisocyanate with 4 to 18 carbon atoms, and
  - E) optionally at least one polyisocyanate having an average functionality of  $> 2$
- 15 at a starting NCO/OH equivalent ratio of 0.5:1 to 1.2:1.

11. A process for adjusting the flow properties of an aqueous paint system, adhesive and another aqueous formulation comprising adding the polyurethane of claim 1 to the aqueous paint system, adhesive and another aqueous formulation.

20 12. An aqueous paint system, adhesive and another aqueous formulation comprising the polyurethane of claim 1.